R. W. Thompson 1777

The Wheat Stem Sawfly Situation
in Manitoba, Saskatchewan, and Alberta for 1941

During 1940 the wheat stem sawfly (*Cephus cinctus* Nort.) caused more crop loss in Canada than at any time the history of prairie agriculture. As the insect continues to increase and spread every effort should be made to reduce these losses by recognized control practices.

The pest attacks all varieties of wheat as well as spring and fall rye. Durum wheats are somewhat resistant to injury by sawfly larvae. Any crop that has reached the "boot" stage during the last half of June is likely to be infested.

The eggs are hidden inside the wheat stem, and the larvae spend their entire development period inside the stem.

Recognize Damage by the Wheat Stem Sawfly

The larva, or "grub" of the sawfly feeds inside the stem of the wheat plant from early July until just before the wheat is ready to cut. At this time the larva girdles the stem from the inside just above the soil surface. The stem eventually breaks off at that point and falls to the ground. Before this happens the presence of larvae in crop may be detected by splitting a few stems. Those infested will be found to be full of fine dust, and if split for the full length, the larva itself may be found.

Examine the Map on the Next Page

The coloured areas show the portions of Manitoba, Saskatchewan and Alberta where wheat stem sawfly is now or has recently been a serious pest of wheat.

The northern and western margins of this general area will suffer losses only in dry years. The rest of the coloured portions may suffer losses every year.

The Wheat Stem Sawfly and Soil Drifting Control

Strip farming is now becoming generally accepted as the best method of controlling soil drifting and is being adopted in many districts throughout the western Canadian plains. This type of cultivation provides ideal conditions for rapid increase of wheat stem sawfly. Within the entire coloured area on the map any permanent strip farming project must have wheat stem sawfly taken into consideration. If an infestation is already present in a field, sawfly control *must* precede strip farming. Throughout a considerable portion of south-central Saskatchewan, particularly in the lighter soils, severe infestations of wheat stem sawfly are present in stripped fields with strips varying in width from 8 to 12 rods. Control measures in these fields are an urgent necessity.

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SPECIAL CIRCULAR
ISSUED BY
THE DIVISION OF ENTOMOLOGY
SCIENCE SERVICE

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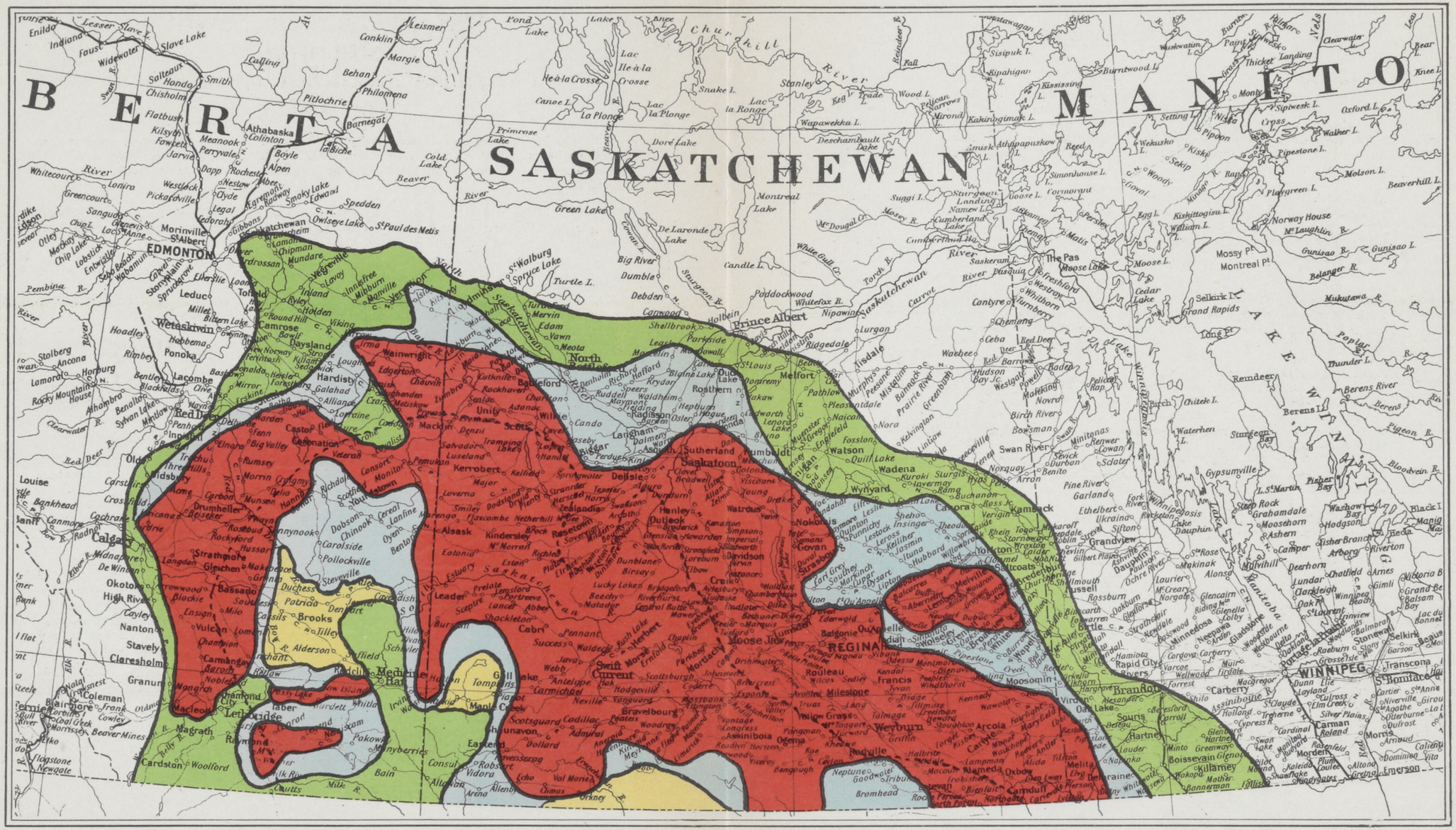
AREA AND RELATIVE INTENSITY OF INFESTATION OF WHEAT STEM SAWFLY EXPECTED IN MANITOBA, SASKATCHEWAN AND ALBERTA IN 1941



Infestation severe; sawfly infestations will build up very rapidly; consequently, sawfly control should precede strip farming.

Infestations moderate; severely infested in the past and will undoubtedly have increased losses in the future. Plans should be made to start sawfly control as soon as economic infestations begin to make their appearance.

Infestation potentially severe; sawfly control should accompany the change to strip farming.

Infestation generally light; will increase during dry years and where strip farming is practised extensively; may occasionally cause considerable crop loss.

– – – – Brome grass grows satisfactorily outside this line; inside the line some difficulty is encountered in establishing brome grass except in wet seasons.

CONTROL MEASURES

On Unstripped Farms

1. Permanent strips of brome grass, 50-60 feet wide as a trap crop should be placed in the headlands and road allowances around each field. If the strip of brome is less than 40 feet wide, a bare strip of ground at least 10 feet wide should be maintained between the brome grass and the crop. This may be used and maintained as a roadway between fields. Adult sawflies passing from one field to another will then deposit their eggs in the brome grass on the margin.

2. Avoid "stubbling-in" wheat in any sawfly-infested field. Where wheat-wheat-fallow rotations are practised the seeding of stubble should be delayed as long as possible.

3. Sow oats or late barely after wheat. Oats will destroy the larvae, and late barely will not be attacked.

On Stripped Farms

1. Establish a trap strip of brome grass around the entire farm, preferably on the headlands and in the road allowances. This should be done wherever possible before stripping is started.

2. Eradicate sawfly by summer-fallow or by seeding the entire field to some immune crop. Oats or flax will eliminate sawfly from a field. *Flax is difficult to harvest where Russian thistle is abundant.*

3. If the farm is already stripped, the trap of brome grass should be established before the immune crop is seeded.

4. Temporary traps of wheat or spring rye should be used while the brome grass is being established.

5. A trap seeded between individual strips will give good protection providing a bare strip of fallow from 10 to 20 feet wide is left between the trap strip and the regular crop.

6. Wheat traps seeded 10 to 12 days ahead of the regular seeding will give good protection.

7. Spring rye traps seeded at the same time or 2 or 3 days later than the crop has been found to give satisfactory control.

8. All traps should be cut for hay between July 10 and 20.

9. Severely infested fields or parts of fields should be harvested before the grain is dead ripe or before the sawfly larvae start cutting the stems.

10. In those areas where brome grass is very difficult to established, temporary traps of wheat or spring rye should be used. (Turn back to map and examine the area suitable for brome production.)

11. Infested fields being summer-fallowed should be surrounded by a temporary trap to reduce the migration into adjoining fields.

Rotations

Avoid rotations with wheat following wheat. Flax followed by wheat has proved very successful in some areas.

Write for further information concerning the wheat stem sawfly to the Dominion Entomological Laboratory at Brandon, Manitoba; Saskatoon, Saskatchewan; or Lethbridge, Alberta; or to the Department of Agriculture at Winnipeg, Manitoba; Regina, Saskatchewan; or Edmonton, Alberta.